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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,804

05/19/2006

Francis P. Kuhadja

#10001.\$190

7358

26853 7590 10/11/2007
COVINGTON & BURLING, LLP
ATTN: PATENT DOCKETING
1201 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20004-2401

EXAMINER

RAHMANI, NILOOFAR

ART UNIT

PAPER NUMBER

1625

MAIL DATE

DELIVERY MODE

10/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,804	Applicant(s) KUHADJA ET AL.	
	Examiner Niloofer Rahmani	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 1-14, 18, 19, 22-31, 33 and 35-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 16, 20, 21, 32 and 34 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-67 are pending. Applicant's election without traverse of group IV, claims 15-17, 20-21, 32, and 34, drawn to compounds and pharmaceutical composition of formula (V and VII) in the reply filed on 07/23/2007 are acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

Claims 15-17, 20-21, 32, and 34, drawn to compounds and pharmaceutical composition of formula (V and VII) are examined. Claims 1-14, 18-19, 22-31, 33, and 35-67 remaining subject matter being drawn to the non-elected invention are withdrawn per 37 CFR 1.142(b).

2. ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

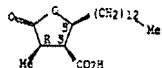
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-16, 20-21, 32, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Asano et al., Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen, 1939, Vol. 72B, pages 35-9. Asano et al. disclosed the instant claimed compounds and compositions, which from the STN search are

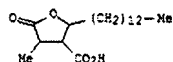
RN 493-45-8

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-tridecyl-,



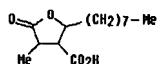
RN 102180-12-1

CN Succinic acid, 2-(1-hydroxytetradecyl)-3-methyl-, g-lactone



RN 854909-07-2

CN Paraconic acid, 4-methyl-2-octyl-

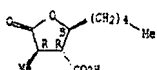


Therefore, the instant claim is anticipated by Asano et al.

3. Claims 15-16, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Drioli et al., Journal of organic Chemistry, 1998, Vol. 63, pages 2385-2388. Drioli et al. disclosed the instant claimed compounds and compositions, which from the STN search are

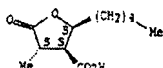
RN 203864-73-7

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



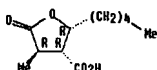
RN 109667-12-1

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



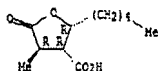
RN 185246-65-5

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



RN 203514-35-6

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,

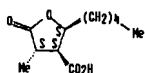


Therefore, the instant claim is anticipated by Drioli et al.

4. Claims 15-16, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al., *Tetrahedron: Asymmetry*, 1996, Vol. 7, pages 1923-1928. Zhang et al. disclosed the instant claimed compounds and compositions, which from the STN search are

RN 109667-12-1

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



Therefore, the instant claim is anticipated by Zhang et al.

5. **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S.

1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

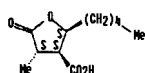
Claims 20-21, and 34 are rejected under 103(a) as being unpatentable over Zhang et al., Tetrahedron: Asymmetry, 1996, Vol. 7, pages 1923-1928.

Determination of the scope and content of the prior art (MPEP §2141.01)

Zhang et al. disclosed analogous compounds and compositions, which from the STN search are

RN 109667-12-1

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claims and the prior art compound is that in the instant claims R²⁷ being C₃-C₄ alkyl, C₆-C₁₀ alkyl, C₁₂ alkyl, C₁₄ alkyl, C₁₆-C₂₀ alkyl. The Zhang et al. teaches that R²⁷ being C₅ alkyl.

Finding of prima facie obviousness-rational and motivation (MPEP §2142.2143)

One having ordinary skill in the art would be motivated to modify the compounds of Zhang et al. to obtain the instant compounds.

A compound that differs only in molecular arrangement from the compounds disclosed in the prior art and which for which no unexpected properties of this compound are disclosed in the specification is unpatentable, *Ex parte KRUEGER AND HAYES*, 121 USPQ 420, *In re NORRIS*, 84 USPQ 458, *In re Hass* 60 USPQ 552, which found a *prima facie* case of obviousness of 1-chloro-1-nitrobutane over 1-chloro-1-nitroisobutane taught in the prior art, *Ex parte Ulliyot*, 103 USPQ 185, which found a *prima facie* case of obviousness of 2-oxo-quinolines over a 1-oxo-isoquinoline taught in the prior art, *In re FINLEY*, 81

USPQ 383 , which found a *prima facie* case of obviousness of 2-ethyl hexyl salicylate over octyl salicylate taught in the prior art.

Compounds that differ only by the presence or absence of an extra methylene group or two are homologues. Homologues are of such close structural similarity that the disclosure of a compound renders *prima facie* obvious its homologues. The homologue is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing homologues. Of course, these presumptions are rebuttable by the showing of unexpected effects, but initially, the homologues are obvious even in the absence of a specific teaching to add or remove methylene groups. See *In re Wood*, 199 USPQ 137; *In re Hoke*, 195 USPQ 148, *In re Lohr*, 137 USPQ 548; *In re Magerlein*, 202 USPQ 473; *In re Wiechert*, 152 USPQ 249; *Ex parte Henkel*, 130 USPQ 474; *In re Fauque*, 121 USPQ; *In re Druey*, 138 USPQ 39.

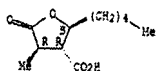
6. Claims 20-21, and 34 are rejected under 103(a) as being unpatentable over Drioli et al., Journal of organic Chemistry, 1998, Vol. 63, pages 2385-2388.

Determination of the scope and content of the prior art (MPEP §2141.01)

Drioli et al. disclosed analogous compounds and compositions, which from the STN search are

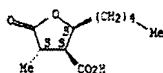
RN 203864-73-7

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



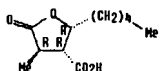
RN 109667-12-1

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



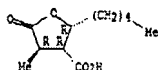
RN 185246-65-5

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



RN 203514-35-6

CN 3-Furancarboxylic acid, tetrahydro-4-methyl-5-oxo-2-pentyl-,



Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claims and the prior art compound is that in the instant claims R^{27} being C_3 - C_4 alkyl, C_6 - C_{10} alkyl, C_{12} alkyl, C_{14} alkyl, C_{16} - C_{20} alkyl. The Drioli et al. teaches that R^{27} being C_5 alkyl.

Finding of prima facie obviousness-rational and motivation (MPEP §2142.2143)

One having ordinary skill in the art would be motivated to modify the compounds of Drioli et al. to obtain the instant compounds.

A compound that differs only in molecular arrangement from the compounds disclosed in the prior art and which for which no unexpected properties of this compound are disclosed in the specification is unpatentable, *Ex parte KRUEGER AND HAYES*, 121 USPQ 420, *In re NORRIS*, 84 USPQ 458, *In re Hass* 60 USPQ 552, which found a *prima facie* case of obviousness of 1-chloro-1-nitrobutane over 1-chloro-1-nitroisobutane taught in the prior art, *Ex parte Ulliot*, 103 USPQ 185, which found a *prima facie* case of obviousness of 2-oxo-quinolines over a 1-oxo-isoquinoline taught in the prior art, *In re FINLEY*, 81

USPQ 383 , which found a *prima facie* case of obviousness of 2-ethyl hexyl salicylate over octyl salicylate taught in the prior art.

Compounds that differ only by the presence or absence of an extra methylene group or two are homologues. Homologues are of such close structural similarity that the disclosure of a compound renders *prima facie* obvious its homologues. The homologue is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing homologues. Of course, these presumptions are rebuttable by the showing of unexpected effects, but initially, the homologues are obvious even in the absence of a specific teaching to add or remove methylene groups. See *In re Wood*, 199 USPQ 137; *In re Hoke*, 195 USPQ 148, *In re Lohr*, 137 USPQ 548; *In re Magerlein*, 202 USPQ 473; *In re Wiechert*, 152 USPQ 249; *Ex parte Henkel*, 130 USPQ 474; *In re Fauque*, 121 USPQ; *In re Druey*, 138 USPQ 39.

7. Claim Objections

Claim 17 is objected to as being dependent upon a rejected base claim¹⁵, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niloofar Rahmani whose telephone number is 571-272-4329. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, can be reached on 571-272-0867. The fax

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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NILOOFAR RAHMANI

10/02/2007

NR



D. MARGARET SEAMAN

PRIMARY EXAMINER

GROUP 1625